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PTO/SB/05 (08-00)  
Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

17510 U.S. PTO  
10/728944



|  |                               |   |
|--|-------------------------------|---|
| <b>UTILITY<br/>PATENT APPLICATION<br/>TRANSMITTAL</b><br><br>(Only for new nonprovisional applications under 37 CFR 1.53(b)) | <b>Attorney Docket No.</b>    | <b>ZE009US</b>  |
|  | <b>First Inventor</b>         | <b>Kia Silverbrook</b>  |
|  | <b>Title</b>                  | <b>A Method of Fabricating a Fluid Ejection Device<br/>Using a Planarizing Step</b> |
|  | <b>Express Mail Label No.</b> |   |

|   |  |
|---|--|
| <b>APPLICATION ELEMENTS</b><br><i>See MPEP chapter 600 concerning utility patent application contents.</i>  | <b>ADDRESS TO:</b> Assistant Commissioner for Patents<br>Box Patent Application<br>Washington, DC 20231  |
| 1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17)<br><i>(Submit an original and a duplicate for fee processing)</i>   | 7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or<br>Computer Program ( <i>Appendix</i> )  |
| 2. <input type="checkbox"/> Applicant claims small entity status.<br>See 37 CFR 1.27.   | 8. Nucleotide and/or Amino Acid Sequence Submission<br><i>(if applicable, all necessary)</i>   |
| 3. <input checked="" type="checkbox"/> Specification [Total Pages <b>70</b> ]<br><i>(preferred arrangement set forth below)</i> <ul style="list-style-type: none"><li>- Descriptive title of the invention</li><li>- Cross Reference to Related Applications</li><li>- Statement Regarding Fed sponsored R &amp; D</li><li>- Reference to sequence listing, a table,<br/>or a computer program listing appendix</li><li>- Background of the Invention</li><li>- Brief Summary of the Invention</li><li>- Brief Description of the Drawings <i>(if filed)</i></li><li>- Detailed Description</li><li>- Claim(s)</li><li>- Abstract of the Disclosure</li></ul> | a. <input type="checkbox"/> Computer Readable Form (CRF)   |
| 4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <b>81</b> ]   | b. Specification Sequence Listing on: <ul style="list-style-type: none"><li>i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or</li><li>ii. <input type="checkbox"/> paper</li></ul> |
| 5. Oath or Declaration [Total Pages <b>3</b> ] <ul style="list-style-type: none"><li>a. <input checked="" type="checkbox"/> Newly executed (original or copy)</li><li>b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63 (d))<br/><i>(for continuation/divisional with Box 17 completed)</i><ul style="list-style-type: none"><li>i. <input type="checkbox"/> <b>DELETION OF INVENTOR(S)</b><br/>Signed statement attached deleting inventor(s)<br/>named in the prior application, see 37 CFR<br/>1.63(d)(2) and 1.33(b).</li></ul></li></ul>  | c. <input type="checkbox"/> Statements verifying identity of above copies  |
| 6. <input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76   | <b>ACCOMPANYING APPLICATION PARTS</b>  |
|   | 9. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & document(s))   |
|   | 10. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of<br><i>(when there is an assignee)</i> Attorney   |
|   | 11. <input type="checkbox"/> English Translation Document <i>(if applicable)</i>   |
|   | 12. <input checked="" type="checkbox"/> Information Disclosure <input checked="" type="checkbox"/> Copies of IDS<br>Statement (IDS)/PTO-1449 Citations                                     |
|   | 13. <input type="checkbox"/> Preliminary Amendment   |
|   | 14. <input type="checkbox"/> Return Receipt Postcard (MPEP 503)<br><i>(Should be specifically itemized)</i>  |
|   | 15. <input type="checkbox"/> Certified Copy of Priority Document(s)<br><i>(if foreign priority is claimed)</i>   |
|   | 16. <input type="checkbox"/> Other: .....  |

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

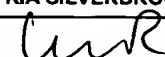
of prior application No.: **09 / 835,702**

Prior application information:

Examiner **An H Do**

Group / Art Unit: **2853**

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

|   |   |                            |  |                 |                          |
|---|---|----------------------------|--|-----------------|--------------------------|
| <b>18. CORRESPONDENCE ADDRESS</b>   |   |                            |  |                 |                          |
| <input checked="" type="checkbox"/> Customer Number or Bar Code Label <b>24011</b> or <input type="checkbox"/> Correspondence address below<br><i>(Insert Customer No. or Attach bar code label here)</i> |   |                            |  |                 |                          |
| <b>Name</b>   |   | <b>KIA SILVERBROOK</b>     |  |                 |                          |
| <b>Address</b>  |   | <b>393 Darling Street,</b> |  |                 |                          |
| <b>City</b>   | <b>Balmain</b>  | <b>State</b>               | <b>NSW</b>                               | <b>Zip Code</b> | <b>2041</b>              |
| <b>Country</b>  | <b>Australia</b>  | <b>Telephone</b>           | <b>+61-2-9818-6633</b>                   | <b>Fax</b>      | <b>+61-2-9555-7762</b>   |
| <b>Name (Print/Type)</b>  | <b>KIA SILVERBROOK</b>  |                            | <b>Registration No. (Attorney/Agent)</b> |                 |                          |
| <b>Signature</b>  |  |                            | <b>Date</b>                              |                 | <b>N v mber 21, 2003</b> |

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120803

16698 U.S. PTO

PTO/SB/17 (10-03)

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# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

(\$ 810.00)

Complete if Known

Application Number

Filing Date

First Named Inventor

Kia Silverbrook

Examiner Name

Art Unit

Attorney Docket No.

ZE009US

## METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☐ Deposit Account:Deposit Account Number  
Deposit Account Name

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments☐ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

| Large Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description        | Fee Paid    |
|----------------------------|----------------------------|------------------------|-------------|
| 1001 770                   | 2001 385                   | Utility filing fee     | 770.00      |
| 1002 340                   | 2002 170                   | Design filing fee      |             |
| 1003 530                   | 2003 265                   | Plant filing fee       |             |
| 1004 770                   | 2004 385                   | Reissue filing fee     |             |
| 1005 160                   | 2005 80                    | Provisional filing fee |             |
| SUBTOTAL (1)               |                            |                        | (\$ 770.00) |

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| Total Claims                | Extra Claims | Fee from below | Fee Paid |
|-----------------------------|--------------|----------------|----------|
| Independent Claims 6        | -20** =      | X              | 0        |
| Multiple Dependent Claims 1 | -3** =       | X              | 0        |

| Large Entity Fee Code (\$) | Small Entity Fee Code (\$) | Fee Description  |
|----------------------------|----------------------------|--|
| 1202 18                    | 2202 9                     | Claims in excess of 20                                     |
| 1201 86                    | 2201 43                    | Independent claims in excess of 3                          |
| 1203 290                   | 2203 145                   | Multiple dependent claim, if not paid                      |
| 1204 86                    | 2204 43                    | ** Reissue independent claims over original patent         |
| 1205 18                    | 2205 9                     | ** Reissue claims in excess of 20 and over original patent |

SUBTOTAL (2)

(\$)

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

## 3. ADDITIONAL FEES

Large Entity Small Entity

| Fee Code    | Fee (\$) | Fee Code    | Fee (\$) | Fee Description  | Fee Paid |
|-------------|----------|-------------|----------|--|----------|
| 1051 130    |          | 2051 65     |          | Surcharge - late filing fee or oath  |          |
| 1052 50     |          | 2052 25     |          | Surcharge - late provisional filing fee or cover sheet                     |          |
| 1053 130    |          | 1053 130    |          | Non-English specification  |          |
| 1812 2,520  |          | 1812 2,520  |          | For filing a request for ex parte reexamination                            |          |
| 1804 920*   |          | 1804 920*   |          | Requesting publication of SIR prior to Examiner action                     |          |
| 1805 1,840* |          | 1805 1,840* |          | Requesting publication of SIR after Examiner action                        |          |
| 1251 110    |          | 2251 55     |          | Extension for reply within first month                                     |          |
| 1252 420    |          | 2252 210    |          | Extension for reply within second month                                    |          |
| 1253 950    |          | 2253 475    |          | Extension for reply within third month                                     |          |
| 1254 1,480  |          | 2254 740    |          | Extension for reply within fourth month                                    |          |
| 1255 2,010  |          | 2255 1,005  |          | Extension for reply within fifth month                                     |          |
| 1401 330    |          | 2401 165    |          | Notice of Appeal   |          |
| 1402 330    |          | 2402 165    |          | Filing a brief in support of an appeal                                     |          |
| 1403 290    |          | 2403 145    |          | Request for oral hearing   |          |
| 1451 1,510  |          | 1451 1,510  |          | Petition to institute a public use proceeding                              |          |
| 1452 110    |          | 2452 55     |          | Petition to revive - unavoidable   |          |
| 1453 1,330  |          | 2453 665    |          | Petition to revive - unintentional   |          |
| 1501 1,330  |          | 2501 665    |          | Utility issue fee (or reissue)   |          |
| 1502 480    |          | 2502 240    |          | Design issue fee   |          |
| 1503 640    |          | 2503 320    |          | Plant issue fee  |          |
| 1460 130    |          | 1460 130    |          | Petitions to the Commissioner  |          |
| 1807 50     |          | 1807 50     |          | Processing fee under 37 CFR 1.17(q)  |          |
| 1806 180    |          | 1806 180    |          | Submission of Information Disclosure Stmt                                  |          |
| 8021 40     |          | 8021 40     |          | Recording each patent assignment per property (times number of properties) | 40.00    |
| 1809 770    |          | 2809 385    |          | Filing a submission after final rejection (37 CFR 1.129(a))                |          |
| 1810 770    |          | 2810 385    |          | For each additional invention to be examined (37 CFR 1.129(b))             |          |
| 1801 770    |          | 2801 385    |          | Request for Continued Examination (RCE)                                    |          |
| 1802 900    |          | 1802 900    |          | Request for expedited examination of a design application                  |          |

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 40.00)

## SUBMITTED BY

Name (Print/Type) Kia Silverbrook

Registration No.  
(Attorney/Agent)

(Complete if applicable)

Telephone 612 98186633

Signature

Date

November 21, 2003

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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ACN 066 573 671

December 4, 2003

Commissioner of Patents and Trademarks  
Washington DC 20231  
USA

Dear Sir

**53 New United States Patent Applications**  
**Assignee: Silverbrook Research Pty Ltd**

This letter accompanies 53 new patent applications.

**53 bank drafts** for the total amount of US\$51,520 are enclosed to cover filing and assignment fees for each of the 53 applications. Also attached is a list giving details of each application.

We look forward to receiving filing receipts in due course.

If you need to contact us in relation to the applications, please email my assistant, Kia Silverbrook at [Kia.Silverbrook@silverbrookresearch.com](mailto:Kia.Silverbrook@silverbrookresearch.com) or by fax to +61 2 9555 7762.

Yours faithfully

Kia Silverbrook  
Silverbrook Research Pty Ltd

| 1  | DOCKET NO. | TITLE  | INVENTORS  | AMOUNT US\$ | PARENT NO   |
|----|------------|--|--|-------------|-------------|
| 1  | ZE017      | Printhead assembly incorporating one or more printhead modules   | Kia Silverbrook, Tobin Allen King                    | 850.00      | ART108      |
| 2  | ZE018      | Printhead assembly incorporating a channel member  | Kia Silverbrook, Tobin Allen King                    | 850.00      | ART108      |
| 3  | ZE019      | Printhead assembly incorporating an elastomeric feed member  | Kia Silverbrook, Tobin Allen King                    | 850.00      | ART108      |
| 4  | ZE020      | Printhead assembly incorporating micromoldings   | Kia Silverbrook, Tobin Allen King                    | 850.00      | ART108      |
| 5  | BAL70      | A camera for printing manipulated images   | Kia Silverbrook, Paul Lapstun, Simon Robert Walmsley | 998.00      | ART51       |
| 6  | BAL71      | A camera for printing on media provided on print roll  | Kia Silverbrook, Paul Lapstun, Simon Robert Walmsley | 1,142.00    | ART51       |
| 7  | BAL72      | A camera for printing manipulated images on media  | Kia Silverbrook, Paul Lapstun, Simon Robert Walmsley | 1,070.00    | ART51       |
| 8  | BAL73      | A camera and controlling processing system   | Kia Silverbrook, Paul Lapstun, Simon Robert Walmsley | 1,070.00    | ART51       |
| 9  | ZE009      | A method of fabricating a fluid ejection device using a planarizing step   | Kia Silverbrook                                      | 810.00      | IJ46 Div. 2 |
| 10 | ZE010      | A micro-electromechanical fluid ejection device with control logic circuitry                                       | Kia Silverbrook                                      | 810.00      | IJ46 Div. 2 |
| 11 | ZE011      | A printhead configuration incorporating a nozzle arrangement layout  | Kia Silverbrook                                      | 810.00      | IJ46 Div. 2 |
| 12 | ZE012      | A method of fabricating a micro-electromechanical device having a laminated actuator                               | Kia Silverbrook                                      | 810.00      | IJ46 Div. 2 |
| 13 | ZF189      | An image capture and processing device for a print on demand digital camera system                                 | Kia Silverbrook                                      | 810.00      | IR18        |
| 14 | ZF190      | A printhead assembly for a print on demand digital camera system   | Kia Silverbrook                                      | 810.00      | IR18        |
| 15 | ZF191      | A printhead re-capping assembly for a print on demand digital camera system  | Kia Silverbrook                                      | 810.00      | IR18        |
| 16 | MTB05      | Ink Jet printhead with circular cross section chamber  | Kia Silverbrook                                      | 1,044.00    | MJ40        |
| 17 | MTB07      | Ink jet printhead with amorphous ceramic chamber   | Kia Silverbrook                                      | 1,116.00    | MJ40        |
| 18 | ZF132      | Composite support beam for printhead assembly  | Kia Silverbrook                                      | 810.00      | MJ44        |
| 19 | ZF133      | Thermal expansion relief for printhead assembly  | Kia Silverbrook                                      | 810.00      | MJ44        |
| 20 | ZF134      | Thermal expansion compensation for printhead assembly  | Kia Silverbrook                                      | 810.00      | MJ44        |
| 21 | ZE013      | A micro-electromechanical fluid ejection device having a chamber that is volumetrically altered for fluid ejection | Kia Silverbrook                                      | 810.00      | MJ95        |
| 22 | ZE014      | A micro-electromechanical fluid ejection device having a nozzle guard  | Kia Silverbrook                                      | 810.00      | MJ95        |
| 23 | MTB01      | Thermal ink jet printhead with short heater to nozzle aperture distance  | Kia Silverbrook                                      | 1,422.00    | MJT001      |
| 24 | MTB012     | Thermal ink jet printhead with low resistance electrodes for heaters   | Kia Silverbrook                                      | 1,422.00    | MJT001      |
| 25 | MTB013     | Thermal ink jet printhead with heater elements supported by electrodes   | Kia Silverbrook                                      | 1,422.00    | MJT001      |

|    |       |   |   |          |        |
|----|-------|---|---|----------|--------|
| 26 | MTB02 | Very high efficiency thermal ink jet printhead  | Kia Silverbrook, August John North, Gregory John McAvoy | 1,502.00 | MJT001 |
| 27 | MTB03 | Low voltage thermal ink jet printhead   | Kia Silverbrook   | 1,422.00 | MJT001 |
| 28 | MTB04 | Inkjet printhead with low mass displacement nozzle  | Kia Silverbrook   | 1,422.00 | MJT001 |
| 29 | MTB06 | Thermal ink jet printhead with bubble collapse point close to nozzle aperture                             | Kia Silverbrook   | 1,422.00 | MJT001 |
| 30 | MTB14 | Heat dissipation within thermal ink jet printhead   | Kia Silverbrook   | 1,422.00 | MJT001 |
| 31 | ZF184 | Ink Distribution assembly   | Kia Silverbrook   | 810.00   | PAK12  |
| 32 | ZG185 | Printhead chassis assembly  | Kia Silverbrook   | 810.00   | PAK12  |
| 33 | ZG186 | Laminated distribution structure  | Kia Silverbrook   | 810.00   | PAK12  |
| 34 | ZG112 | Chips with wafer scale caps formed by molding   | Kia Silverbrook   | 810.00   | WSM01  |
| 35 | ZG113 | Two part mold for wafer scale caps  | Kia Silverbrook   | 810.00   | WSM01  |
| 36 | ZG114 | Wafer scale caps located by molding   | Kia Silverbrook   | 810.00   | WSM01  |
| 37 | ZG115 | Molded wafer scale cap array  | Kia Silverbrook   | 810.00   | WSM01  |
| 38 | ZG116 | Placement tool for wafer scale caps   | Kia Silverbrook   | 810.00   | WSM01  |
| 39 | ZG117 | Mold making method for wafer scale caps   | Kia Silverbrook   | 810.00   | WSM01  |
| 40 | ZG118 | Chip with molded cap array  | Kia Silverbrook   | 810.00   | WSM01  |
| 41 | ZG119 | Molded wafer scale cap  | Kia Silverbrook   | 810.00   | WSM01  |
| 42 | ZF117 | Thermoelastic inkjet actuator with heat conductive pathways   | Kia Silverbrook, Gregory John McAvoy                    | 850.00   | YU185  |
| 43 | ZE005 | An ink jet printhead chip having an actuator mechanisms located about ejection ports                      | Kia Silverbrook, Gregory John McAvoy                    | 850.00   | YU195  |
| 44 | ZE006 | A method of fabricating an ink jet printhead chip having actuator mechanisms located about ejection ports | Kia Silverbrook, Gregory John McAvoy                    | 850.00   | YU195  |
| 45 | ZE007 | A micro-electromechanical fluid ejection device having actuator mechanisms located about ejection ports   | Kia Silverbrook, Gregory John McAvoy                    | 850.00   | YU195  |
| 46 | ZE008 | A micro-electromechanical fluid ejection device having nozzle chambers with diverging walls               | Kia Silverbrook, Gregory John McAvoy                    | 850.00   | YU195  |
| 47 | ZG187 | Page binder with air cushion and non-contact adhesive applicator  | Kia Silverbrook   | 850.00   | ZF107  |
| 48 | ZG188 | Page binder with adhesive applicator for gluing trailing edge of pages                                    | Kia Silverbrook   | 850.00   | ZF107  |
| 49 | ZG189 | Page binder with two part adhesive applicator   | Kia Silverbrook   | 850.00   | ZF107  |
| 50 | MTB08 | Inkjet printhead with ink supply passage to nozzle etched from opposing sides of wafer                    | Kia Silverbrook   | 1,170.00 | ZF121  |

|    |       |  |                 |           |       |
|----|-------|--|-----------------|-----------|-------|
| 51 | MTB09 | Inkjet printhead with non-uniform width ink supply passage to nozzle                               | Kia Silverbrook | 1,112.00  | ZF121 |
| 52 | MTB10 | Inkjet printhead with ink chamber inlet etched into wafer  | Kia Silverbrook | 1,256.00  | ZF121 |
| 53 | MTB11 | Inkjet printhead with ink supply passage formed from both sides of the wafer by overlapping etches | Kia Silverbrook | 1,256.00  | ZF121 |
| 56 |       |  |                 |           |       |
| 57 |       |  |                 | 51,520.00 |       |